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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,924	05/14/2001	Toshihisa Yokoyama	782_163	7936

25191 7590 03/28/2003

BURR & BROWN  
PO BOX 7068  
SYRACUSE, NY 13261-7068

EXAMINER

SONG, MATTHEW J

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 03/28/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/854,924

Applicant(s)

YOKOYAMA ET AL.

Examiner

Matthew J Song

Art Unit

1765

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 March 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.

10. ☐ Other: \_\_\_\_\_

ROBERT KUNEMUND  
PRIMARY EXAMINER

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 3/21/2003 have been fully considered but they are not persuasive.
2. In response to applicant's argument that skilled artisans would not have been motivated to use Ciszek's step of blowing a cooling medium directly onto the liquid-solid crystal interface in Imaeda's method of forming oxide single crystal is noted but has not been found persuasive. Applicants contend that one skilled in the art would expect even a more undesirable effect at the hotter liquid-solid interface. However, the Imaeda reference only discloses disadvantages of a large thermal gradient **after** the crystal is grown. The Imaeda reference does not disclose any disadvantages of maintaining the temperature uniformity at a solid-liquid interface during growth, as taught by Ciszek.
3. In response to applicant's argument that a skilled artisan would not conclude that oxide single crystals could withstand the cooling treatment using the Ciszek reference, which is designed for silicon crystals is noted but has not been found persuasive. Applicants contend that a skilled artisan would not look to Ciszek for growing an oxide single crystal disclosed in Imaeda because silicon has a higher coefficient of thermal conductivity and a lower coefficient of thermal expansion in comparison to an oxide single crystal, which is merely applicant's opinion. Arguments of counsel cannot take the place of evidence (In Re Greenfield 197 USPQ 227).

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4. In response to applicant's argument that Ciszek does not disclose cooling the oxide single crystal is noted but has not been found persuasive. The Ciszek reference discloses flowing a gas to different segments of the liquid **solid crystal** interface, note column 5, lines 15-20. The solid crystal interface taught by Ciszek reads on applicant's cooling oxide single crystal.